

Work Order ID 153067

Monday, November 07, 2016 4:09:07 PM

153067

Page 1

Item ID: D3825-043

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Rib Assembly (Basket End, Lid)

Start Date: 11/14/2016 Start Qty: 2.00

Required Date: 11/17/2016 Req'd Qty: 2.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

DAS
21
9-89

Date: NOV 09 2016

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3825

C

100

0.00

1000

Large Fab

Large Fab

Large Fab

Memo

0.08

1- cut D3825-3 rib as per dwg D3825

2- drill hole (3/16") in D3825-3 using DT9822 jig and open to finish size as per dwg D3825

3- c'sink hole as per dwg

4- remove identification markings

5- deburr

6- weld D2327-1 spacer & D4021-9 bushing as per dwg D3825

A/R S.S. Rod Batch: 136695

7- grind bushing weld flush where indicated on dwg D3825

8- deburr if necessary

8 17-02-22

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Work Order ID 153067

Monday, November 07, 2016 4:09:07 PM

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Page 2

Item ID: D3825-043

Accept

N900040100

Setup Start

NS1

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Stop

NS2

Item Name: Rib Assembly (Basket End, Lid)

Start Date: 11/14/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 11/17/2016 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC9- Inspect visual per QSI004- Fusion Welds

0.00

130

QC

Memo

0.00

Quality Control

8x6x SH 17-02-27

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.01

Quality Control

8x6x SH 17-02-27

150

Identify as per dwg & Stock Location:

0.00

150

Packaging

Memo

0.00

Packaging

LOCATION WA004

8x6x SH 17-02-27

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Work Order ID 153067

Monday, November 07, 2016 4:09:07 PM

153067

Page 3

Item ID: D3825-043

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Rib Assembly (Basket End, Lid)

Start Date: 11/14/2016 Start Qty: 2.00

2

Cust Item ID:

Required Date: 11/17/2016 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.03

DAS
21
9-89

FEB 27 2017

Quality Control

DAS
21
9-89

FEB 27 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

207 216 512 329
160 486 56

Picklist Print

Monday, November 07, 2016 4:09:07 PM

Page 1

Work Order ID: 153067

153067

Parent Item: D3825-043

D3825-043

Parent Item Name: Rib Assembly (Basket End, Lid)

Start Date: 11/14/2016

Required Date: 11/17/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 12.07.24 AS PER REV.B DD VERF:EC IPP
REV:B 12.08.08 AS PER DWG REV.C DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2327-1		Manufactured	No			100	Each	10.0000	1	2			
✓ *D2327-1*													
Spacer Bushing													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA004				10					
					144389			10					
D4021-9		Manufactured	No			100	Each	24.0000	2	4			
✓ *D4021-9*													
Bushing													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA004				24					
					145800			3					
					147436			21					
M304TS0.750W.065		Purchased	No			100	f	799.0000	2.125	4.473684			
✓ *M304TS0 750W 065*													
304 SQ Tube .75x.75x.065W													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA004				799					
					m133412			399					
					m135655			400					

B155959** 8x 17-02-24
B155962** 18x 17-02-24
B155371** 10x
B136378** 18 17-02-22

DQA: _____ Date: _____



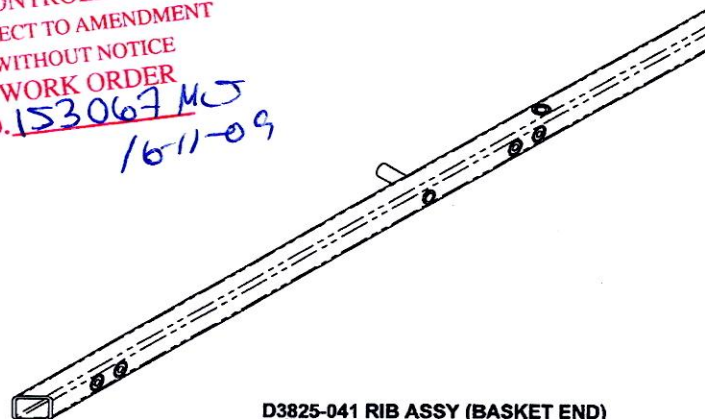
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

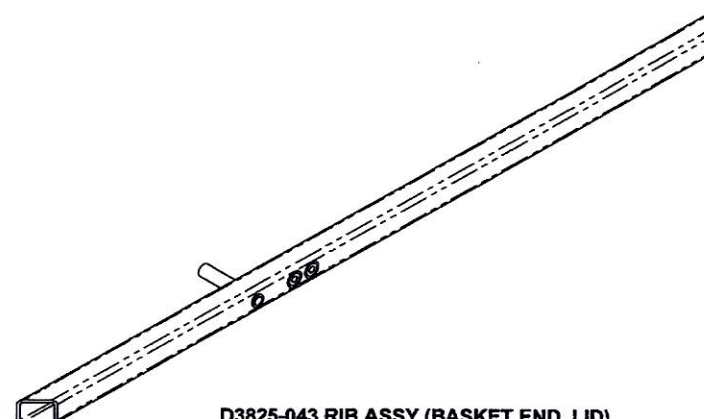
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____			
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐									
		OTHER : _____									

SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 153067 MJS
 1611-09



D3825-041 RIB ASSY (BASKET END)



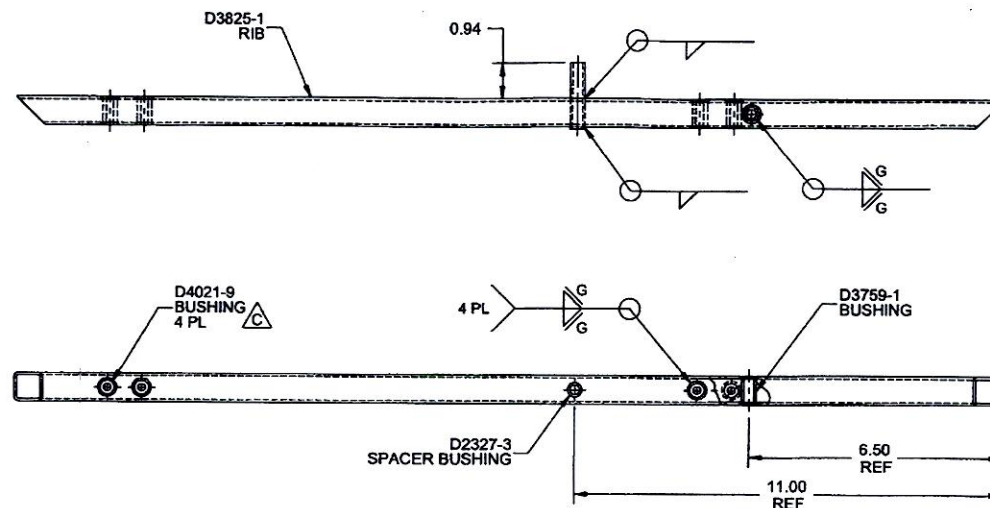
D3825-043 RIB ASSY (BASKET END, LID)

ITEM	QTY -041	QTY -043	P/N	DESCRIPTION
	X		D3825-041	RIB ASSEMBLY (BASKET END)
		X	D3825-043	RIB ASSEMBLY (BASKET END, LID)
1		1	D2327-1	SPACER BUSHING
2	1		D2327-3	SPACER BUSHING
3	1		D3759-1	BUSHING
4	1		D3825-1	RIB
5		1	D3825-3	RIB
6	4	2	D4021-9	BUSHING

RELEASED
 2012-08-03
 WMP

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: D3825-041 = 1.27 lbs; D3825-043 = 1.23 lbs
 - 8) WELDING: PER DART QSI 004

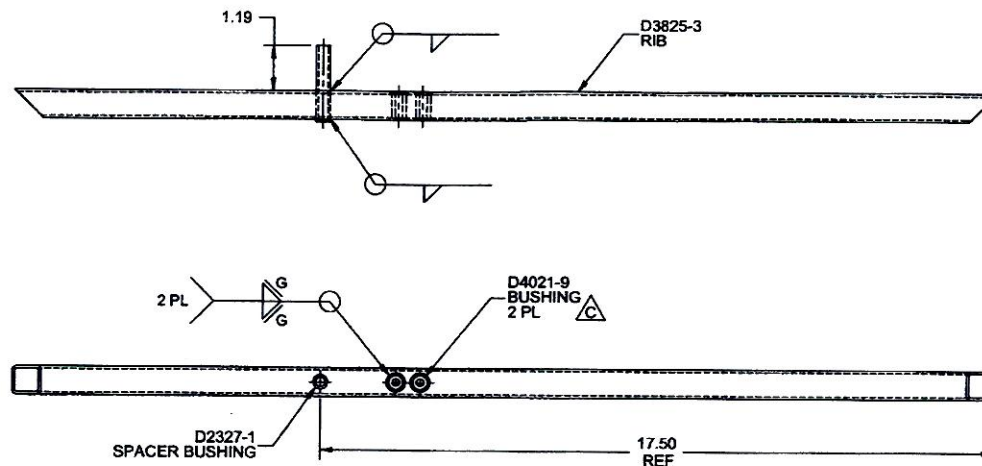
C	QTY(4) D4021-9 ON -041 AND QTY(2) D4021-9 ON -043 WERE D3759-1. CORRECTED DIM (ZIN B3-4) WAS 14.875. REASON FOR CHG: ANS SIZE BOLTS REQ'D IN THOSE LOCATIONS.	MB	12.07.18
B	QTY(5) FOR D3759-1 WAS QTY(1); AFFECTS D3825-041-1 (ZIN'S D3-1, C4-2, C3-2, D4-4, C6-4, C4-4, C3-4). ADDED D3825-043-3. REASON: PAR10-50.	MB	12.05.11
A	NEW ISSUE	MB	08.09.23
REV.	DESCRIPTION	BY	DATE
DESIGN	1/1	DART AEROSPACE LTD	
DRAWN	1/1	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AP	DRAWING NO.	REV. C
MFG. APPR.	1/1	D3825	SHEET 1 OF 4
APPROVED	1/1	TITLE	SCALE
DE APPR.	1/1	RIB ASSY (BASKET END)	NTS
DATE	12.07.18	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR FOR THE DISSEMINATION OF ANY INFORMATION THEREOF WITHOUT PERMISSION FROM DART AEROSPACE LTD.	



D3825-041 RIB ASSY (BASKET END)

RELEASED
2012-08-03
JMP

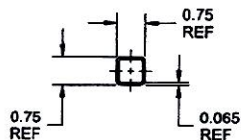
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED	AL	DRAWING NO. D3825	REV. C
MFG. APPR.			SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		RIB ASSY (BASKET END)	NTS
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D3825-043 RIB ASSY (BASKET END, LID)

RELEASE
2012-08-03

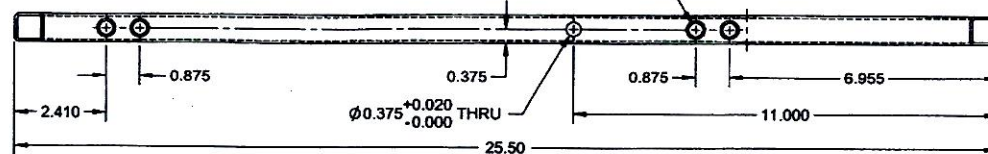
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3825	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		RIB ASSY (BASKET END)	NTS
DATE	12.07.18	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON AN EXPRESS SPECIFICATION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR ON BEHALF OF ANY OTHER PARTY WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	



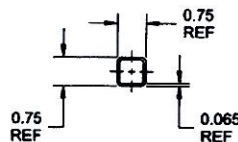
0.75 X 45°
CHAMFER
TYP

$\varnothing 0.375^{+0.020}_{-0.000}$ THRU
 $\varnothing 0.49 \times 100^\circ$ CSK
ON BOTH SIDES

$\varnothing 0.375^{+0.020}_{-0.000}$ THRU
 $\varnothing 0.49 \times 100^\circ$ CSK
4 PL, ON BOTH SIDES

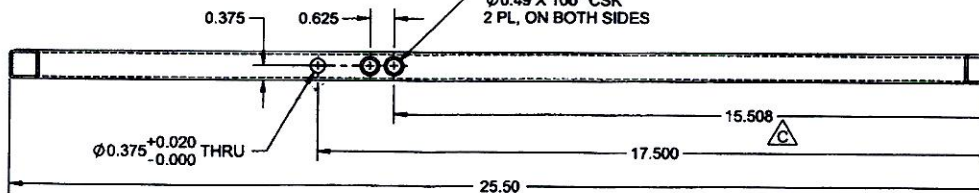


D3825-1 RIB



0.75 X 45°
CHAMFER
TYP

$\varnothing 0.375^{+0.020}_{-0.000}$ THRU
 $\varnothing 0.49 \times 100^\circ$ CSK
2 PL, ON BOTH SIDES



D3825-3 RIB

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBE, 0.75 X 0.75 X 0.065 WALL
REF. DART SPEC. M304TS0.750W.065
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 1.16 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3825	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		RIB ASSY (BASKET END)	NTS
DATE	12.07.18	COPYRIGHT © 2008 BY DART AEROSPACE LTD ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT PERMISSION FROM DART AEROSPACE LTD.	

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2012-08-03
WJP